

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 46575 7/31/2000]

[Docket No. 99-NM-211-AD; Amendment 39-11834; AD 2000-15-05]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 Military), -40, and -40F Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 military), -40, and -40F series airplanes, that requires a one-time inspection of the wiring and wire bundles of the aft main avionics rack (MAR) to determine if the wires are damaged, or riding or chafing on structure, clamps, braces, standoffs, or clips, and to detect damaged or out of alignment rubber cushion inserts of the wiring clamps; and corrective actions, if necessary. This amendment is prompted by an incident in which the automatic and manual cargo door test in the cockpit was inoperative during dispatch of the airplane, due to wiring of the MAR chafing against clamps as a result of the wire bundles being installed improperly during production of the airplane. The actions specified by this AD are intended to ensure that the wires that route from the main wire bundles to the MAR and associated brackets, clamps, braces, standoffs, and clips are installed properly. Improper installation of such wiring and structure could cause chafing of the wires/wire bundles, which could result in electrical arcing, smoke, and possible fire in the MAR.

DATES: Effective September 4, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 4, 2000.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Natalie Phan-Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5343; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 military), -40, and -40F series airplanes was published in the **Federal Register** on January 26, 2000 (65 FR 4190). That action proposed to require a one-time inspection of the wiring and wire bundles of the aft main avionics rack (MAR) to determine if the wires are damaged, or riding or chafing on structure, clamps, braces, standoffs, or clips, and to detect damaged or out of alignment rubber cushion inserts of the wiring clamps; and corrective actions, if necessary.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Support for the Proposed AD

Two commenters support the proposed AD.

Request to Withdraw Proposed AD

One commenter requests that the proposed AD be withdrawn. The commenter states that the original problem, which was noted in the proposed AD, that led to the issuance of McDonnell Douglas Alert Service Bulletin DC10-24A165 was due to a production problem on McDonnell Douglas Model MD-11 series airplanes. The commenter also states that it has been performing general visual inspections of the subject area on numerous occasions as part of its FAA-approved DC-10 maintenance program. The commenter contends that performing these inspections again is overly redundant and unnecessary.

The FAA does not concur. The FAA acknowledges that Model DC-10 series airplanes have an extensive life of service, and that operators have performed numerous inspections as a part of the FAA-approved DC-10 maintenance program. As part of the continued airworthiness requirements, all operators are required to periodically maintain their airplanes in accordance with an FAA-approved maintenance program. However, the FAA finds that the subject inspections of the maintenance program may not adequately address certain in-service difficulties and, thus, do not adequately address the identified unsafe condition. The FAA has determined that the actions required by this AD will address the identified unsafe condition. In light of this, the FAA has determined that this AD is appropriate and warranted.

Request to Extend Compliance Time

One commenter requests that the compliance time from accomplishing the general visual inspection be extended from the proposed 60 days to 18 months. The commenter states that the 60-day compliance time is illogical given the extensive service life of the affected airplanes. The commenter also states that the inspection should be accomplished during the FAA-approved maintenance program task that accomplishes the same inspection.

The FAA does not concur. The FAA finds that an 18-month compliance time, which coincides with the FAA-approved maintenance program task that accomplishes a similar inspection required by this AD, would not maintain an adequate level of safety. In developing an appropriate compliance time for the inspection required by this AD, the FAA considered not only the degree of urgency associated with addressing the subject unsafe condition, but the manufacturer's recommendation as to an appropriate compliance time, the availability of required parts, and the practical aspect of accomplishing the inspection within an interval of time that parallels the normal scheduled maintenance for the majority of affected operators. In light of these items, the FAA has determined that the compliance time, as proposed, represents an appropriate interval in which inspection can be accomplished in a timely manner within the fleet and still maintain an adequate level of safety. However, under the provisions of paragraph (g) of the final rule, the FAA may approve requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety.

Request to Revise Reporting Requirement

One commenter requests that the compliance time of the reporting requirement be revised from within 10 days after accomplishing the inspection to "within 10 days after the AD compliance date." The commenter also requests that the reporting requirement be limited to positive findings only. The commenter states that the compliance time extension would allow them to submit one report describing findings for its entire fleet.

The FAA partially concurs. The FAA does not concur with the commenter that only positive findings should be reported. The FAA finds that both negative and positive findings of the inspection are necessary to determine if further rulemaking is necessary. The FAA concurs with the commenter that the inspection results may be submitted to the FAA within 70 days after the effective date of this AD. Therefore, the FAA has revised paragraph (f) of the final rule accordingly.

Request to Revise Work Hour Estimate

One commenter requests that the work hour estimate for accomplishing the proposed inspection be revised from 3 work hours to 5 work hours, because of the large numbers of wires in the subject area.

The FAA does not concur. The FAA used the work hours (rounded up) specified in McDonnell Douglas Alert Service Bulletin DC10-24A165, dated April 14, 1999 (which is referenced in the AD as the appropriate source of service information for accomplishment of the required inspection). The FAA notes that the economic analysis of the AD is limited only to the cost of actions actually required by the rule. It does not consider the costs of "on condition" actions, such as repairing a crack if one is detected during a required inspection ("repair, if necessary"). Such "on-condition" actions would be required to be accomplished -- regardless of AD direction -- in order to correct an unsafe condition identified in an airplane and to ensure

operation of that airplane in an airworthy condition, as required by the Federal Aviation Regulations. Therefore, no change to the final rule is necessary.

Explanation of Change to Affected Airplane Models

Throughout the proposed AD, the affected airplanes are listed as “Model DC-10-10, -15, -30, -30F, and -40 series airplanes and KC-10A (military) airplanes.” The FAA finds that operators may misinterpret the term “series” when determining which airplane models are subject to the requirements of this AD. Therefore, the FAA finds that clarification is necessary. The FAA’s intent was that applicability of the proposed AD include, among other series airplanes, all series of Model DC-10-10 and DC-10-40 airplanes (i.e., Model DC-10-10, DC-10-10F, DC-10-40, and DC-10-40F), as listed in McDonnell Douglas Alert Service Bulletin DC10-24A165, dated April 14, 1999 (which references the specific affected manufacturer’s fuselage numbers, including those numbers that correspond to Model DC-10-10F and DC-10-40F series airplanes). In addition, operators should note that Model DC-10-30F series airplanes, as listed in the applicability, include two military airplane models (i.e., KC-10A and KDC-10). The FAA has revised the affected airplanes throughout the final rule to read “Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 military), -40, and -40F series airplanes.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 412 Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 military), -40, and -40F series airplanes of the affected design in the worldwide fleet. The FAA estimates that 300 airplanes of U.S. registry will be affected by this AD, that it will take approximately 3 work hours per airplane to accomplish the required inspection of the wiring and wire bundles, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the required inspection by this AD on U.S. operators is estimated to be \$54,000, or \$180 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460



U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at <http://av-info.faa.gov>

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2000-15-05 MCDONNELL DOUGLAS: Amendment 39-11834. Docket 99-NM-211-AD.

Applicability: Model DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10 military), -40, and -40F series airplanes, as listed in McDonnell Douglas Alert Service Bulletin DC10-24A165, dated April 14, 1999; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure that the wires that route from the main wire bundles to the main avionics rack (MAR) and associated brackets, clamps, braces, standoffs, and clips are installed properly, accomplish the following:

One-Time General Visual Inspection

(a) Within 60 days after the effective date of this AD, perform a one-time general visual inspection of the wiring and wire bundles of the aft MAR to determine if the wires are damaged, or riding or chafing on structure, clamps, braces, standoffs, or clips, and to detect damaged or out of alignment rubber cushion inserts of the wiring clamps; in accordance with McDonnell Douglas Alert Service Bulletin DC10-24A165, dated April 14, 1999.

Note 2: For the purposes of this AD, a general visual inspection is defined as "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Note 3: Where there are differences between this AD and the referenced alert service bulletin, the AD prevails.

Note 4: The wording "main avionics rack" in this AD and the wording "main radio rack" in the alert service are used interchangeably.

Corrective Actions

(b) If any damaged wiring is detected during the inspection required by paragraph (a) of this AD, prior to further flight, repair in accordance with the alert service bulletin.

(c) If any wire/wire bundle is detected to be riding or chafing on the subject areas during the inspection required by paragraph (a) of this AD, prior to further flight, accomplish paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) Route and tie all wires/wire bundles so they are not in contact with adjacent wire bundles, clamps or structure, and install silicon rubber coated glass cloth wrapping on wiring, if necessary, in accordance with the alert service bulletin.

(2) Perform a general visual inspection of all brackets, clamps, braces, standoffs, and clips to make sure they are not bent or twisted and do not come in contact with wires/wire bundles, in accordance with the alert service bulletin. If any of these parts is bent or twisted or is in contact with wires/wire bundles, prior to further flight, reposition in accordance with the alert service bulletin.

(3) Perform a general visual inspection of the clamps for proper alignment or for damage of the rubber cushion, in accordance with the alert service bulletin. If any clamp is not aligned properly, prior to further flight, realign the clamp in accordance with the alert service bulletin. If any rubber cushion is damaged, prior to further flight, replace the clamp in accordance with the alert service bulletin.

(d) If any damaged rubber cushion insert is detected during the inspection required by paragraph (a) of this AD, prior to further flight, replace the clamp with a new or serviceable clamp in accordance with McDonnell Douglas Process Engineering Order DPS 1.834-7, Revision CF, dated June 29, 1999.

(e) If any rubber cushion insert is out of alignment, prior to further flight, visually realign the cushion.

Reporting Requirement

(f) Within 70 days after the effective date of this AD, submit a report of the results (both positive and negative findings) of the inspection required by paragraph (a) of this AD to the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, 3960 Paramount Boulevard, Lakewood, California 90712-4137; fax (562) 627-5210. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

Alternative Methods of Compliance

(g) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The actions shall be done in accordance with McDonnell Douglas Alert Service Bulletin DC10-24A165, dated April 14, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(j) This amendment becomes effective on September 4, 2000.

FOR FURTHER INFORMATION CONTACT: Natalie Phan-Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5343; fax (562) 627-5210.

Issued in Renton, Washington, on July 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.